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ABSTRACT

Designed for use by prime sponsors, state manpower service councils, and others interested in career planning information, this technical assistance guide provides information about career decision making and the delivery of career information within the context of employment and training programs. The guide raises issues and considerations to be addressed by program planners and operators in implementing programs. Major topics covered in the guide include (1) the importance of career choice, (2) criteria for career choice and career information, (3) determination of career/occupational information needs, (4) range of information types and formats, (5) choice of information storage and retrieval methods, (6) problems and innovations in storing and using information, (7) evaluation and selection of career information material, (8) evaluation and selection of career information system, (9) implementation/organization of a system, and (10) location of assistance sources. Specific criteria for evaluating career information and the systems which deliver information are provided. (LRA)

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Systems of Career/Occupational Information For Youth and Other CETA Participants: Guidelines & Considerations for CETA Prime Sponsors

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PREFACE

In FY 1979, the Employment and Training Administration spent close to $40 million on labor market information, the Bureau of Labor Statistics, several million dollars more, and the National Occupational Information Coordinating Committee (NOICC), jointly funded by DOL and HEW, supported another $10 million of activities. Under CETA, approximately $10 million went to state-wide programs of labor market information including career counseling and information. Millions more are spent annually at the local level on the provision of career guidance, counseling and information services under CETA programs. Career information and related activities are authorized throughout CETA and complementary education legislation such as the Career Education Incentive Act, the Vocational Education Act and the Elementary and Secondary Education Act. The dollars associated with these laws have created a network of community and school based career information delivery systems.

A nation-wide survey of CETA-LEA agreements under the Youth Employment and Training Program (YETP), conducted during the winter of 1978-79 found that counseling and the provision of labor market information were among the transition services offered in at least 80% of all programs. The survey found that where served, 14 and 15 year old youths were offered primarily counseling services.

Numerous information systems, guidance and counseling programs and materials have been developed and marketed by the Federal government and a myriad of private commercial enterprises. One of the most significant of such system investments has been the ETA funded National Career Information System program which is part of NOICC's overall Occupational Information System and soon will be extended to additional states under NOICC's leadership.

Research in this area is sparse although there is some evidence that those with more knowledge about the world of work do better in labor market terms, at least in the short run. In addition, even though common sense would dictate that individuals can make better decisions with increased knowledge, there is no consensus among experts as to whether youth use formal sources of information in making decisions regarding employment, training and education and if they do, what kind of information they want and can use. Under the auspices of NOICC we are trying to get answers to some of these questions. One study using control and experimental groups is underway to test the impact of a comprehensive career information and world of work orientation program on high school youth. The impact of similar programs, providing a broader range of transition services is also being evaluated in separate demonstration projects.

Most importantly, the National Institute of Education, again under the auspices of NOICC has commissioned a national survey of how and what kinds of career information youth are getting within the public secondary school system. The various methods of transmitting such information will be categorized into distinquishable career information delivery systems which will then be assessed on a comparative basis as to their utilization, cost, attractiveness, and ability to deliver various types of information.

Despite the major dollar commitment in this field, and the numerous program authorities under which programs operate, counselors, teachers and others working directly with youth generally are unfamiliar with what career information sources are available. They do not know how to effectively use the information that is available, nor do they understand other limitations of these information sources or the potential benefits individual participants may experience by systemmatic exposure to the information.

CETA participants and all youth make decisions continually that will affect their future lives. Their entry into employment, the choices they face regarding education and training, and their need to learn more about themselves, do not stop while researchers decide on the best way to facilitate these processes. Just as youth don't operate with perfect knowledge in making career decisions, program operators and policy makers are forced to respond to programmatic needs on a daily basis and to make decisions based on best judgments and the limitations of resources available.

The purpose of this technical assistance guide is to provide you with a sense of what we do know about career decisionmaking and the delivery of career information within the context of employment and training programs as well as to raise issues and considerations that should be addressed by program planners and operators in implementing such programs within their communities. It is not a definitive document but rather an entry exposure to many of the considerations in selecting and utilizing career information, particularly for youth.

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SYSTEMS OF CAREER/OCCUPATIONAL INFORMATION FOR YOUTH AND OTHER CETA PARTICIPANTS: GUIDELINES AND CONSIDERATIONS FOR CETA PRIME SPONSORS

INTRODUCTION

The function of CETA is to provide assistance to economically disadvantaged, unemployed and underemployed people in order that they may obtain and hold jobs. If CETA is to be effective long-term in meeting these goals, CETA eligibles must receive training and work experience in an organized and systematic manner consistent with their interests, experiences and goals. If CETA eligibles are placed in programs willy-nilly or in a haphazard fashion they are denied a basic fundamental American right--the right to choose their occupation. Obviously, for many CETA eligibles, circumstances militate against their exercise of optimal freedom in choosing an occupation. CETA program resources are limited and many of the eligibles have personal limitations which restrict the array of occupations from which they can choose. Nevertheless, they have the right to choose from among the alternatives available. To maximize career choice, CETA participants, like all people, need some basic understanding about themselves relative to the world of work, knowledge of alternatives available, and the ability to decide among alternatives.

Providing people with assistance in making career choices is a complex task. A key element in providing good assistance is good career information. Individuals making decisions regarding employment and training opportunities must have basic job market information. People cannot effectively choose what they do not know. Good career information systems can provide CETA participants with the vital information necessary to exercise their right to choose.

Career information, particularly if made available through a career information system, can be used by CETA participants directly or it can be used by CETA staff charged with assisting participants. When the information is made available through a career information system, participants can either use the information to explore career or training alternatives or to gain specific information needed to make a career decision. Staff can use a career information system to assist individuals with particular needs. They can use it to help those with inappropriate choices explore other alternatives, those with tentative choices decide, and those undecided to explore and choose. A career information system can also be used in assisting clients select appropriate training experiences.

Career information, particularly a career information system, can thus benefit CETA operations in several ways: (a) it can maximize client choice within the confines of the CETA operation; (b) it can improve the matching of clients to service offerings thus assuring better use of scarce resources; (c) it can reduce the time needed by staff to provide effective career counseling by providing them with near instant access to vital information; and (d) data in the system can be used conjunctively with other information to

improve crucial management functions. While program limitations may not allow optimum training and placement choice among all the occupations possible for any individual client, the CETA participants possessing information on job opportunities, requirements and benefits are more likely to perceive the relevance of training and work experiences offered than they would if they did not have the information.

Authorities

Several CETA titles authorize funding for Career Information or Career Information Systems. Title I, administrative provisions of CETA, calls for a Governor's coordination and special services plan (section 105), which includes directives to provide Career information [(6), (7), (8), (11), and (12)]. These include the development and implementation of career information activities for use by and with disadvantaged individuals served by CETA including youth, in-school clients, the handicapped who are receiving rehabilitation services, and others who use the services of prime sponsors and state employment security agencies. Also, the general CETA authority and planning requirements for prime sponsors (section 103), include such services as job search assistance, counseling and other services. These services may include career information and career information systems.

Title II, Part B, Sec. 211 (1) includes reference to the provision of job search assistance including orientation, counseling, and referral to appropriate employment and training services. Title III, Part B, Sec. 315 refers to the National Occupational Information Coordinating Committee and its responsibility for (3) "assisting and encouraging the development of state occupational information systems, accessible to local schools, including pilot programs in the use of computers to facilitate such access...".

The goals of Title IV Youth Programs, Subpart 3 (Youth Employment and Training programs) are even more explicit. Sec. 431 reads:

> It is the purpose of this subpart of established programs designed to make a significant long-term impact on the structural unemployment problems of youth, supplementary to but not replacing programs and activities available under Title II of this Act, to enhance the job prospects and career opportunities of young persons, including employment, community service opportunities, and such training and supportive services as are necessary to enable participants to secure suitable and appropriate unsubsidized employment in the public and private sectors of the economy. To the maximum extent feasible, training and employment opportunities afforded under this subpart shall be interrelated and mutually reinforcing so as to achieve the goal of enhancing the job prospects and career opportunities of youths served under this subpart.

Section 432 (a) states: "The Secretary is authorized to provide financial assistance to enable eligible applicants to provide employment opportunities and appropriate training and supportive services for eligible participants, including--(3) appropriate training and services to support the purpose of this subpart, including--

(A) outreach, assessment, and orientation;

(B) counseling, including occupational information and career counseling;

(C) activities promoting education to work transition;

(D) development of information concerning the labor market, and provision of occupational, educational, and training information;

(E) services to youth to help them obtain and retain employment;

(H) job sampling, including vocational exploration in the public and private sector;

(M) community-based central intake and information services for youth;

(N) job development, direct placement, and placement assistance to secure unsubsidized employment opportunities for youth to the maximum extent feasible, and referral to employability development programs;

(O) programs to overcome sex-stereotyping in job development and placement."

B and D refer specifically to occupational and related career information. A, C, H, M and O relate directly to means of enhancing the effectiveness of career information systems. In essence, career information and career information systems are not only allowable but advisable under the Youth Program priorities. Moreover, unlike other CETA programs, Youth Employment and Demonstration Programs permit a portion of the funds to be spent for those who are not economically disadvantaged.

Purpose of these Guidelines

These guidelines have been developed for use by Prime Sponsors, State Manpower Service Councils and others interested in career planning information. These guidelines present basic background considerations on career information and career information systems. Criteria for evaluating career information and the systems which deliver the information are provided. A careful reading of this document should assist interested agencies in selecting good career information and information systems.

Career Information and Career Information Systems

There are significant differences between career information and career information systems. Career information is any information related to occupations or careers. It can be found in any variety of media ranging from pamphlets through audiovisual materials. On the other hand, a career information system consists of more than an amalgam of diverse information on the

world of work. A system consists of coordinated and interrelated parts. The best of such systems have at least three components: (a) an information component; (b) a delivery component; and (c) a user service component. A good system is built on good information--accurate, comprehensive and specific to the locale. A good system delivers the information in a manner that encourages use by individuals. It also provides information to a wide variety of users. And, a good system provides training for those who will use it in order that its use becomes integrated into the overall mission of the organization.

A career information system should relate education, training, and other career information to information about specific occupations. It is conceptually different from "a job system" which is designed to match prospective applicants to specific job openings.

While these traditional distinctions between job, occupation and career will be kept throughout this document, it is important to be aware that frequently the terms are used elsewhere interchangeably. Therefore, it is important to look at system content to determine its focus. A very important illustration of this point pertains to the development of the National Occupational Information Coordinating Committee (NOICC) and the State Occupational Information Coordinating Committees (SOICC's) authorized under CETA and Vocational Educationlegislation. The concept evolving out of NOICC-SOICC is a broad-base Occupational Information System (OIS) in each state which includes career and specific occupational as well as job information for the entire spectrum of users, such as direct participants in the labor market, labor market intermediaries such as counselors, placement persons, teachers, etc., and planners or program administrators.

THE IMPORTANCE OF CAREER CHOICE

There are a number of reasons why career choices are crucial and why good career information is essential to these choices. This is particularly true for young people. Their early choices frequently determine their life career patterns.

Career choices are important on both a personal and a societal level. On a personal level career choices impact on a person's entire life. They impact on where and how a person lives, what that person's non-job pursuits and leisure activities are, and how he or she is perceived by others. More importantly, career decisions influence self-perceptions, attitudes, values and beliefs. Specific choices also have an impact on employment status. The person who chooses an occupation where employment is known to be consistent and stable increases the probability of having work when others do not. Occupational choice may also impact on success or failure. Since people differ in their capabilities, those selecting occupations which maximize utilization of strengths will probably experience a greater degree of success than those who select occupations which make heavy demands upon personal weaknesses. For young people the choice often times is difficult since they do not have experiences to draw upon which help identify their strengths and weaknesses. Occupational choices also frequently determine whether or nor people will enjoy their work. There are many who believe that

an occupation must provide for particular personal and emotional needs. If this does not in fact occur, frequently unhappiness or discontent may result.

On a societal level the aggregate choices people make determine where manpower shortages and surpluses occur. When too many people prepare for occupations which are currently overcrowded, human resources are wasted. Conversely, when too few people select occupations where there are labor shortages, some basic societal needs may not be fulfilled. Preparation for an occupation is expensive and, for the most part, publically financed.

In many instances CETA applicants are those who have made inappropriate choices. Frequently they are or were unaware of opportunities that either exist or existed at the time when they made choices. In a work oriented culture such as our own, the failure to "make it" in the world of work usually has a profound impact on all aspects of that person's life including their perception of self-worth.

CAREER CHOICE & CAREER INFORMATION

Career choices are not one-time events. People make choices, not a choice. Career development is integrally related to total life development. This is true regardless of theoretical orientation. People may believe that their career is the means of enacting their self concept or that a career is selected to meet felt or unfelt needs.

Effective career choices involve knowledge about self, knowledge about the world of work and skills in decision-making.

Ideally, for effective career choice a person should know:

(a) what s/he wants out of life;

(b) what s/he wants out of an occupation; and

(c) what s/he has to offer (or is willing to acquire) for what s/he wants.

For optimum effectiveness a person also should know:

(a) what occupations are available to fulfill what is wanted;

(b) what these occupations require; and

(c) what these occupations offer.

This knowledge of self and the world of work must be coupled with sound decision-making skills which enable the weighing of pros and cons and allow for compromise. In addition to the above, there is need to know how to implement the choices made; that is, how to effectively locate job opportunities and how to get a job once located.

Extensive information is required to enact the process described above. The amount of good information the decision-maker has must thus effect the quality of the decision to be made. However, with or without good information people make choices. Research indicates that good information can enhance the choice process, and can lead to greater satisfaction with the career choices made. However, people cannot choose what they do not know.

Obviously, good information by itself is not enough. It must be coupled with knowledge and acceptance of personal strengths and limitations as well as clear thinking about the relative merits and significance of the facts. Knowledge of career information cannot be effectively applied without corresponding knowledge about self. Equally obvious, knowledge of self can only be effectively applied to career choice when something about career information is known.

Career information is particularly crucial for young people. Young people have need of some career information for both exploratory and decision-making purposes. Those youth remaining in school need information to effectively select both careers and training in preparation for those careers. Potential dropouts need information to assist them in becoming aware of the alternatives that remain open to them. Minority and disadvantaged youth in areas of high unemployment need career information to become aware of multiple opportunities elsewhere. The handicapped need information to become aware of the full range of opportunities open to them.

Making career information available to youth through a variety of organizations at a variety of locales may have a positive impact in their overall career development. Without this information it is not likely that the career patterns of youth, particularly those in the special populations, will differ significantly from those of the role models in their locale.

This guide does not purport or imply that good career information alone will guarantee healthy career development or effective career decision-making. Neither does it purport that a good information system can substitute for effective career counseling or guidance. Most people need professional assistance in both learning to better understand themselves and learning effective decision-making skills. These are vital to sound career decision-making. These are the crucial dimensions counselors, and not machines, can provide.

Good career guidance and counseling, like good career decision-making, requires good career information. The newest Dictionary of Occupational Titles lists 20,000 separate titles. Regardless of the number of occupations counselors explore with their clients, adequate personal knowledge of all the vital details of these occupations is beyond any one counselor's personal grasp. Consequently, if adequate career counseling is to be provided, career information systems are needed to augment the counselor's services.

CAREER/OCCUPATIONAL INFORMATION PEOPLE NEED

People have different needs for occupational and career information. Some people need much information, some people track into a career goal very early, others have no idea what they are capable of doing nor how to go about exploring possibilities. The person not knowing what is wanted out of life needs different information than the person who does. Just as obviously, people have different needs for assistance in internalizing the information they receive. Nevertheless, many people have common information needs.

Generally, people need to have basic information on:

(a) the range of jobs open to them;

(b) where and how to obtain information about occupations; and

(c) how to find the job of their choice.

Research indicates that few people are aware of the extensive range of occupations open to them. Likewise, few know where to obtain good information or how to appraise its accuracy and worth. Many more are unaware of the multitude of factors which should be considered in making an occupational choice. And, few are knowledgeable about good job-seeking and getting skills.

This general lack of knowledge about vital occupational information is true for the population in general--the disadvantaged as well as those people not coming from disadvantaged backgrounds, or suffering from unemployment. This is especially true of all youth since they have had little opportunity to gain experience from the world of work. The CETA applicant population is generally economically disadvantaged, and suffers from unemployment or underemployment, or are youth about to enter the labor market. Thus, it is highly unlikely that many CETA applicants, young or old, possess even the limited knowledge of the occupational world held by their more advantaged non-CETA counterparts. For adults, this lack of knowledge about alternatives, openings and employability skills probably is an important factor in their failure to obtain adequate employment. For youth, this lack of knowledge may prevent them from achieving what they otherwise might.

The needs and benefits of information for youth and adults has been well documented. For example, Parnes has found that the extent of a person's information about the world of work is positively linked to measures of success in the labor force.[1] Moreover, a recent school dropout study in Wisconsin reveals that a majority of the dropouts said they left school because they could see no relationship between school and future work. While career information cannot in itself make up for deficiencies in school programming, it can realistically convey world of work information both to young people and to school planners and teachers so that they can better relate education to work. Consequently, career information can benefit students directly and individually as well as indirectly. With adults, career information can assist them in becoming aware of alternatives that they might not otherwise see.

While youth and adults have information needs in common, their needs generally differ as well. Beginning during their early teens, young people are in need of general information regarding occupations for the purpose of exploring alternatives. This information should describe the occupations, show interrelationships among occupations, and detail the training prerequisites for entry. This exploration period should encompass several years. Once young people have completed the exploratory stage and are at the point of making a definitive choice, their information needs parallel those of adults. At these times, they, like adults, need specific information on all facets of the occupations.

Good career information, particularly good career information systems, can meet the diverse and common needs of both youth and adults. However, to do so, the following kinds and types of information must be provided:

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[1] Parnes, H.S. and Kohen, A.E. Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experiences of Young Men, 1-6, R & D Monograph 16, U.S. Department of Labor, Employment and Training Administration, 1977.

1. Descriptive Information About the Occupation

   a. A description of duties or tasks (nature of the work).

   b. A description of special tools, equipment, or instruments used on the job.

   c. Identification of other occupations that have similar skill or knowledge requirements (skill transferability). Information on related occupations or job families.

   d. Opportunities for promotion or career advancement (career ladders or lattices). Information on hiring channels (how the job or occupation can be obtained).

   e. Working conditions (e.g., indoors or outdoors, work week and schedules, and working conditions such as stress, physical settings, safety, etc). Information on the work environment that is related to the occupation (e.g., kind of supervision or people in the work situation, organization structure, etc.).

2. Requirements of the Occupation

   a. Personal requirements: Interests, aptitudes, abilities, and physical qualities that can be related to characteristics of the occupation (e.g., requirements for lifting, working with detail, ability to see results of work, etc.).

   b. Preparation requirements:

      1) general education

      2) school subjects or courses of study

      3) special training or education

      4) work experience

   c. Other requirements:

      1) licensing or certification information

      2) information on associations or unions

      3) information on examinations that may be required

      4) information on special requirements such as citizenship, language, etc.

3. Economic Information About the Occupation

   a. The number of workers in the occupation and related data--industry employment, geographic distribution, self-employment, etc.

   b. Descriptive outlook information, including projections of demand, supply, relationship between supply and demand, and factors that affect outlook (technological, economic, or demographic). Information on major sources of supply (e.g., apprenticeships, on-the-job training, or specific kinds of training). Opportunities for certain groups (e.g., special hiring programs for minorities, training program graduates, etc.).

c. Information and data on earnings (beginning earnings, average earnings, and ranges).

d. Information on fringe benefits (vacations, insurance, etc.).

e. Information on costs to workers (union membership, tools and equipment, etc.).

4. Related Information About the Occupation

a. Information on education and training locations.

b. Information on financial aid and assistance.

c. Information on conducting a job search.

d. Information specific to the needs of special populations (disadvantaged, handicapped, minorities and women).

INFORMATION TYPES & FORMATS

Career information is extensively available today in a variety of types and formats. The formats range from the printed page to audiovisual materials such as video cassettes, films, filmstrips, records and audiotapes. The National Vocational Guidance Association has developed a system for classifying the various types of occupational information. These include: (1) Career Fiction; (2) Biography; (3) Single Job Information; (4) Job Family Information; (5) Jobs in Specific Business, Industry, or Services; (6) Recruitment Literature; (7) Orientation---World of Work; (8) Special Groups; (9) Bibliography; (10) Directory; (11) Financial Assistance; and (12) Other Types. Each of these types is briefly described below.

Career Fiction. An occupational description portrayed through characters in a short story or novel.

Biography. Career information presented via biographical materials consists of the real life account of a person as he or she prepares for and advances in a specific career.

Single Job Information. Consists of information covering a single occupation. Usually it consists of an occupational "brief" of several pages which is presented for exploratory purposes.

Job Family Information. Consists of information on a field of work consisting of numerous related occupations such as "classroom science," etc.

Jobs in a Specific Business, Industry or Services. This consists of information on the occupations represented in a specific industry, business or service.

Recruitment Literature. This consists of information designed to recruit or attract people to a particular field or career.

Orientation--World of Work. This consists of information developed to assist people in making occupational choices.

Special Groups. This consists of information specially designed for specific groups such as the handicapped, disadvantaged or women.

Bibliographies. Consist of listings of books and materials dealing with career and occupational information.

Directory. Consist of lists of institutions offering education and training for occupations or careers.

Financial Assistance. These consist of sources of information on the provisions of financial assistance for career or occupational training or education.

Other Types of Publications. This includes other diverse occupational and career information including such things as posters, reports, charts, etc.

The great bulk of occupational information is provided in printed form regardless of the media in which it is presented. Some printed materials are provided on microfilm cards, others on computer cathode-ray terminals or printouts but most is presented in pamphlets or books. Regardless, most of the printed materials cover the same basic topics with the same primary objectives--to describe an occupation or group of occupations. What differs is the order in which items are presented and the emphasis on particular topics. Beyond the primary objective of description, objectives differ according to the producer. Some develop materials for profit, others for public relations and still others to recruit or attract top candidates to the field. These secondary purposes impact on the emphasis of topics presented.

In addition to printed materials, there is an increasing number of audiovisual sources of occupational information available. These include audio and videotapes, films and filmstrips. Like printed materials, audiovisual information generally covers the same topics and is produced for the same basic purposes. Access to these materials is available through commercial vendors as well as through publicly funded programs of career information.

There appears to be some evidence that it is important to have materials of several types and formats because of the varying interests and ability levels of young people. For example, audiovisual materials have been demonstrated to attract more interest on the part of those young people with poor reading skills. Similarly, the interactive nature of computerized information systems with their content and search flexibility appears to stimulate use particularly during the exploratory process.

Specific listings of a variety of career materials can be obtained from:

(1) State Departments of Education,

(2) Job Service Offices,

(3) Vocational Rehabilitation Offices,

(4) National Book and Educational Material Vendors,

(5) Professional Education Associations, both state and national, (e.g., American Personnel Guidance Association - APGA; American Vocational Association - AVA; National Career Education Association),

(6) Labor Unions and Business Associations (e.g., AFL-CIO, National Alliance of Business),

(7) Existing career and occupational information systems.

INFORMATION STORAGE & RETRIEVAL

The method of information storage directly effects usage. How materials are stored determines how they will be accessed. Materials can be stored or filed in a number of ways: (a) alphabetically; (b) by subject; (c) by interest; (d) by industry; (e) by employer (f) according to geography; (g) by a code or numerical system; or (h) by any combination of the above.

Each of the above methods has both strengths and weaknesses. There is an axiom that the more complicated the system, the more likely it will require staff to assist others in its use. Yet simple filing systems present other problems. For example, an alphabetical system is simple and readily expandable, however, it does not allow for the grouping of related occupations. Moreover, an alphabetical system may become unwieldly once it is expanded and require numerous subdivisions with occupations.

Those deciding on developing their own filing system or adapting one of the coded or numerical systems should review the pros and cons of the different methods. These can be found in any text on the Information Service (see bibliography).

Regardless of what filing, access, and retrieval system or systems adapted or purchased, it should at least: (a) be easy to use; (b) be expandable; (c) be adaptable; and (d) allow for ready access to related occupations, employers and industries.

As an alternative to developing filing and access procedures, potential users should consider the feasibility of purchasing an existing system. Most systems have a variety of built-in access strategies and offer other advantages which frequently offset higher costs.

PROBLEMS & INNOVATIONS IN STORING & USING INFORMATION

With changes occurring in the marketplace at an accelerating pace, an up-to-date picture of the world of work is difficult to obtain. The almost daily advent of new occupations and the elimination of old ones creates special problems in keeping a traditional library of books and pamphlets on the occupational world current. The time required to develop, print and distribute printed documents often results in their being outdated before they are available for widespread use. Moreover, the sheer magnitude of information which is pertinent to career exploration and choice has reached such proportions that normal printing and storage is becoming less and less feasible. In addition, printed pamphlets and books must be distributed widely to be cost feasible. This means that the information these contain must be national in scope at a time when much of the most pertinent data needed by individuals is specific to the locale. The above facts coupled with the fact that current generations are becoming less oriented to printed media has led to considerable efforts to provide alternative career information delivery systems.

These delivery systems attempt to solve the problems cited above by utilizing modern technological innovations. Norris, Zeran and Hatch classify these technological innovations into two groups: (a) computer technology; and (b) multimedia techniques. The multimedia techniques include those they refer to as "gaming" and those they refer to as "Mechanical Devices." Gaming includes simulation, role playing, etc. as a means primarily of motivating people to consider their career development and explore alternatives. Mechanical devices include such things as sound filmstrip series, microfilm cards with readers, and needle sort systems. Most of the mechanical systems have been designed to promote either systematic exploration or decision-making. Those interested in previewing either the gaming techniques or mechanical devices can usually obtain sample materials from commercial publishers or from guidance and career education consultants with the state educational agency. Many state educational agencies produce a microfilm needle sort or other mechanical system for distribution to state schools.

Computer technology provides the most viable technological alternative to libraries of books and pamphlets. The computer can provide: (a) almost unlimited storage of information; (b) multiple access strategies; and (c) near immediate access to information. In addition, computer technology allows for interactive use by clientele thus making the exploration process potentially appealing. Computer memory banks also allow for easy modification and updating. This holds the potential for increasing the accuracy of information available to users.

Those agencies which either have or might obtain funding should seriously consider the purchase of a mechanized or computerized system. The cost can be offset by the advantages such systems provide both staff and clientele. However, since systems differ in merit as well as cost, those considering purchasing or adapting should closely evaluate all components of various systems.

Existing career information systems abound under the auspices of a variety of agencies both public and private. Commercial vendors have developed a large quantity of career information materials, some of which have been organized into what they call systems. Other commerical vendors have developed career information systems which catalog and retrieve information. Publicly funded programs for career and occupationally related information have developed in a number of ways. Currently nine states have received Dept. of Labor support for comprehensive career information systems. At the same time, the Dept. of Labor has funded the development of more specialized systems, some of which are known as Job Match and Job Search. In the public domain, federal funding has produced a number of incentives for career information. Legislation providing for CETA, YEDPA, Career Education Incentive Act, Educational Information Centers, Vocational Education and NOICC-SOICC's has produced a number of programs.

While turfmanship and competition in the private vendor domain is to be expected, it is equally existent in the public domain where various programs operators are only cognizant of their system. On the other hand, there are also many cooperative working arrangements between private and publicly funded programs as well as consortiums of publicly funded programs. In most instances, these cooperative ventures have proved to be successful and beneficial to all

participants. Consequently, various kinds of cooperative arrangements should be explored before arbitrarily choosing or eliminating a career information component or system on the basis of who owns it.

EVALUATING AND SELECTING CAREER INFORMATION MATERIAL

While there is an abundance of career information available, much of it is obsolete, inaccurate or biased. Consequently, before information is provided to those requiring it, it should be evaluated both for quality and appropriateness for the clientele with which it will be used. Much of the career information available has been evaluated by committees of the National Vocational Guidance Association. These committees evaluate the materials according to both type and format. To assist these committees, as well as others who seek to prepare or evaluate career information, the NVGA has developed Guidelines for the Preparation and Evaluation of Career Information. These guidelines establish specific criteria for producing or evaluating the content, style and format of each type of information. Potential users of career information should become familiar with these guidelines.

Potential users of materials should initially pre-screen and evaluate materials for themselves. Materials that pass pre-screening should then be further checked by consulting the NVGA Bibliography of Current Career Information. This bibliography contains the NVGA committee ratings of each type of information. This bibliography is published every two years and is augmented in the interim by ratings published in the Vocational Guidance Quarterly. In rating the materials each is classified as either: (1) highly recommended; (2) recommended; (3) useful; or (4) not recommended.

Criteria for evaluating career information material

To initially screen materials potential users should ask some very basic questions:

(1) What information is presented?

(2) Why was it produced?

(3) Who produced the information?

(4) When was it produced?

(5) Where was the data obtained?

(6) How was the information gathered?

(7) How is the information presented?

What? The "what" of production involved basic issues regarding the content of the information. Career and occupational information can be used for basically two purposes--exploration and decision-making. Information materials designed to promote exploration need not be as detailed or as specific as those needed by the person deciding on a job or training program. Nevertheless, both types should contain information on each of the following topics: (a) the nature of the occupation; (b) the work performed; (c) the work setting;

(d) potential personal rewards; (e) entry requirements; (f) advancement possibilities; (g) outlook for future; (h) related occupation; (i) licensing or membership requirements; and (j) personal qualifications needed for success.

Why? The "why" of production deals with the purpose of the information. Some information is developed for recruitment or entertainment, while other information is written to present relevant facts as accurately as possible. If the materials were developed with even the secondary purposes of public relations or recruitment, those pre-screening the information should check it out further to make sure that it presents a well balanced and unbiased picture of the occupation.

Who? The work of scholars is likely to be more complete and to provide more accurate information than, for example, the U.S. Army which may be biased toward recruiting members. The production of occupational information is demanding work requiring specialists. Materials not indicating sponsors and qualifications of those doing the research should be rejected.

When? "When" is a very important question. Technology can quickly and drastically change the marketplace and worker skill requirements. Referring people to outdated information could have undesirable consequences. Consequently, all materials should have the date of publication given. Much material that is in pamphlet or book form is already three years old by the time it is published. Materials with a publication date more than two years prior should be either rejected or crosschecked for changes in the occupational requirements.

Where? Where the research was done and data gathered are also important. Much so-called national information is based on research done only in several metropolitan areas. Such information may be highly misleading to rural clientele. It is important to make sure that if the information is claimed to be national in scope that the research on which it was based was national.

How was it produced? How the information was developed, compiled and collected is also important in determining its accuracy. The methods used in garnering the data should be provided. The materials should be authenticated either by recognized experts or by obviously appropriate research studies.

How is it presented? Of equal importance is the way in which the material is presented. If the information is reading material and is to be used for exploratory purposes, the appropriateness of the reading level must be determined. Research has indicated that the great bulk of printed occupational information is written at reading levels above those of the clientele for whom the material is intended. Thus, at least one of the reviewers should be able to utilize a "reading-ease" formula to assure that the materials selected are appropriate to the reading level of clientele who will use it. The information should also be interesting in form. If it is dull and drab it is not likely to be used. It should also be free from sex, racial and white-collar bias.

Those working with young people should be particularly cognizant of the critical nature of the who, what, where, why and how questions. Young people do not have the experience base from which to individually evaluate materials as they use them. Being at an impressionable point in their lives may lead many of the young users to build false expectations from biased or recruitment

materials. To paraphrase a statement Robert Hoppock once made, "sending a young person to explore unevaluated career materials is like sending that person to a drugstore to fill his or her own prescription."

The need to evaluate materials before having young people use them does not mean that they should be excluded from the screening and evaluation process. A panel of young people from diverse backgrounds with differing interests could be trained in evaluation techniques. This might help assure the selection of materials which attract use as well as provide those involved with a more in-depth knowledge about the complexity of the world of work.

Criteria for Selecting Materials

Once materials are evaluated, the next step is selection. The agency can select either a diverse combination of materials or a single source of materials. Criteria for selection are contingent upon the goals, needs, interests, & budget of the agency. Each of these should be considered in light of the population to be served. Consequently, the following criteria for selection are offered only as a general guideline.

The materials selected should be:

(a) accurate;

(b) representative;

(c) attractive;

(d) keyed to the interests and abilities of clientele; and

(e) cost effective.

Accurate The major criterion in selecting materials is accuracy. Regardless of how attractive or inexpensive materials may be they should not be used if they are not accurate. Unfortunately, good career information is not easy to come by. Just as unfortunately, poor career information is abundant. Much of the available career information is biased, based upon poor research, and outdated. Printed career information, even when based upon the latest research, is usually at best three years old by the time it is available for acquisition or purchase.

Frequently those not knowledgeable about the pitfalls of available information are reluctant to purchase information systems because much career information is provided free of cost. Also, most free career information is not free from bias. Much of it is developed for recruitment or purposes other than providing the best information possible.

Representative Regardless of the scope of a school's or agency's services, the materials selected should include representative groups of occupations. These should cover the most common occupations in the world of work, current entry fields, and the fields of work in the locale and region where the agency or school is located. Particular emphasis should be given to assure a balance between entry level occupations for youth as well as occupations requiring advanced education or experience.

Attractive Appearance, particularly of reading materials, is an important factor in encouraging use by clientele. Materials that are drab, overly technical or scholarly are unlikely to be widely used. Consequently, illustrations, covers, writing style, size of print and so on should be considered when selecting materials. For youth, the materials should appeal to and identify with that age group.

Keyed to Interests and Abilities of Clientele If materials are to be used with youth for exploratory purposes, it is important that information is included on those occupations which interest the clientele. Including such materials will assist in attracting use even if the "interesting" occupations are not feasible for most of the clientele. Of equal importance in assuring use is the suitability of materials to the ability levels of the clientele. If they can't read it, they are unlikely to use it. Therefore, those selecting materials should have a clear conception of both the interests and reading levels of clientele.

Cost Effective For most agencies, cost must be a consideration in selecting materials. However, cost alone should not be the deciding issue. A wealth of pamphlets and booklets can be obtained at little or no cost. Therefore, cost should be weighed against effectiveness. The dollar cost of a more expensive material may be offset by savings in staff time. Likewise, the ease of accessing information from more costly materials may assure much wider use by clientele.

EVALUATING AND SELECTING A CAREER INFORMATION SYSTEM

As mentioned previously, career information systems are more than an amalgam of diverse information on the world of work. These systems can be mechanized, computerized, exclusively books and pamphlets, or any combination of these. Regardless, systems consist of coordinated and interrelated parts. Good systems have at least three components: (a) information; (b) delivery; & (c) user services.

Below, each of these components is briefly discussed. Additionally, information is presented on system organization and on limitations of systems. Presented with the discussion are points which those interested in selecting an information system should consider on evaluating the merits of the system.

Information Component

Some systems deliver information in a very sophisticated manner. However, regardless of the sophistication of delivery, an information system is only as good as the information it delivers. Obsolete or misleading information attractively delivered may do more harm than good. Consequently, the first thing a potential user of a system should do when considering adoption or purchase is evaluate the information the system delivers. In evaluating the information, potential users should employ the same guidelines (see above) they would use if evaluating any career materials. When evaluating information in a system, potential users should take extreme care because it is much less easy and much more costly to change a system than a book or pamphlet. When evaluating the information component of any career information system it is important to involve the potential users in the evaluation. If youth are to be a primary target group, then the information component of any system should be evaluated by involving youth in the process.

Delivery Component

A good delivery component, whether computerized or not, provides more than availability for use. It must also attract use, be easily operable, be adaptable for various uses and be consistently dependable in operation. Likewise the potential user population should be involved in the evaluation of the delivery system. For example, if disadvantaged youth are a major audience and a test run on the system shows it to be complicated or unattractive to them, an alternative system should be considered. In essence then, a good delivery system is:

(a) accessible

(b) attractive

(c) user operable

(d) adaptable

(e) reliable.

Accessible Accessibility refers to appropriate availability. To rate high on accessibility a system should:

(a) enable users to use it throughout the day,

(b) be useable and available both before and after regular hours,

(c) be capable of being centrally located,

(d) provide for confidential and non-conspicuous use.

Attractive Attractiveness refers to the appeal of the system. Attractiveness is particularly important for promoting career exploration. Also, the attractiveness of a system greatly affects the attention span of the user. A system that is attractive to young persons will be much more likely to hold their attention for a longer time. This is especially important when working with students of low motivation or interest since their attention span is often short and their concentration is easily diverted. To rate high on attractiveness the delivery system should:

(a) be aesthetically appealing,

(b) deliver information at a level appropriate to the clientele,

(c) delivery information in an interesting style with visually appealing print, illustrations and charts. Printing should be legible and easy to read.

User Operable User operability refers to the ease with which the system can be used by those who have need of the information. To rate high on user operability, a system should:

(a) enable users of varying abilities to have access to desirable information without assistance,

(b) provide instructions for use which are easily understandable by users of varying abilities,

(c) provide structured access procedures which promote users' understanding of key occupational and labor market information,

(d) permit the user to gain direct access to desired specific information without being required to proceed through structured access procedures,

(e) permit the user access to any information in the system.

Adaptable Adaptability refers to the capability and ease with which the system can be modified for effective use both in a variety of locales and with users having different needs. To rate high in adaptability a system should:

(a) employ more than one medium to deliver desired information,

(b) provide the means for integrating the information with interests, values, and abilities,

(c) permit use both for career exploration as well as for career decision-making,

(d) provide interesting legible summary copies for future reference by users,

(e) be expandable & have the capability of being easily updated,

(f) be capable of being tailored to local needs.

Reliable Reliability refers to the dependability of the system. To be rated high in reliability a system should:

(a) have a demonstrable record of consistent operation,

(b) use standard equipment widely available,

(c) tolerate hard use,

(d) if an electronic system, have a backup system to be used during "down time" or updating,

(e) not require extensive periods of time for modifications or updating,

(f) if mechanical or electronic, have staff available to assist in solving the system's problems,

(g) have repair parts readily and easily available.

User Services Component

User services are the support services provided to users by the organization or agency which has developed or markets career information in a systematic manner. User services are vital for a number of reasons. First, most systems can be used in a variety of ways either directly by those needing the information or by those having responsibility for assisting others achieve career independence. Without training in how to use the system it is unlikely that it will be used to its full capability. Additionally, many counselors and staff have not had pre-service training in appropriate use of career information with their clientele. Inappropriate use by them may negate much of the potential benefits young people can derive from a good information system. Consequently, at least some of the staff at most agencies or schools need assistance in learning how to use career information effectively in helping individuals experiencing problems.

User services staff, even of a good system, cannot be expected to provide agency staff with in-depth training in the use of career information. However, a good user services staff at a minimum should provide:

(a) staff training in use of the system,

(b) consultation on effective ways to utilize career information in the organization,

(c) orientation to the weaknesses and limitations in the system as well as strengths and benefits,

(d) orientation to the kinds and amount of information youth and adults can effectively absorb in work sessions with a career information system,

(e) ongoing consultation and surveying of staff and users to determine information needs,

(f) consultation with staff prior to program modifications or updating,

(g) ongoing in-service to staff as modifications and updates are made.

Organization & Sponsorship

In addition to evaluating the user services provided, those interested in implementing or utilizing the service of information systems should examine the organization sponsoring and/or marketing the system. A fundamental point to consider is the purpose for which the organization is in the business of providing or selling career information.

Since it is costly to develop or adopt a career information system, particularly if computerized, the stability or potential stability of the organization as well as ongoing or projected efforts to improve the system and reduce costs should be examined. Questions to ask regarding the organization include:

(a) How is or will the organization be structured?

The organization should include representatives of both producers and users of career information. If it does not it is important to find out why not.

(b) Where is or will the management of the system located?

If users are to receive optimal service as well as impact on policies, the management of the organization should be within the geographical region served.

(c) Does or will the system have a manager or director?

The system should have a qualified director to provide leadership to the system and liaison with member organizations and other agencies.

(d) How is or will the system be governed?

The organization whould have by-laws and formal agreements with participating agencies.

(e) Does or will the sponsoring organization engage in inter-agency cooperation to maximize quality and minimize cost?

Cost can be reduced through multiple agency use. Thus, it is important that the organization is making ongoing efforts to solicit inter-agency use and cooperation.

(f) How is or will the sponsoring organization funded?

Some systems are provided with funding through grants during the initial periods of development. It is important to know how long outside fudning will be provided, how costs will be affected once funding has ceased, and when state and local funding arrangements will be developed.

(g) How long has the sponsoring organization been in existence? Is the organization stable? If new, how likely is the organization to be stable?

The length of time an organization has been in effect is some measure of its stability. It is crucial to determine whether or not the system has a high probability of continuing before investing scarce monies and staff time.

(h) Does or will the organization have a broad base of diverse users?

A broad base of diverse users will help assure continuation of the system. Diverse users can more readily exert political pressure to continue public funded systems.

(i) What is or will be the cost of the system per site? per user? Is there a probability that this will increase or decrease in the future?

Cost per user relates directly to funding sources, the ongoing efforts of the organization to obtain inter-agency cooperation, and the growth pattern of the system. With computerized systems, cost per user should decrease as the user population grows unless support funding is withdrawn.

Since computerized systems are infinitely more capable of delivering comprehensive career information, a CETA prime sponsor, state educational agency, state rehabilitation agency or state Job Service office should consider the above points in relation to the potential for a coordinated effort among these agencies. The model for this, the nine career information systems currently funded by DOL, has been adopted by the National Occupational Information Coordinating Committee (NOICC) as the standard for future systems' development. The continuation of this program concept is a major activity of NOICC.

Limitations & Cautions

Regardless of how good the information in the system is relative to other information services, no body of career information is completely accurate. All information is generalized, it is based on averages derived from various job sites in various locales. Working conditions, wages, and so on vary from locale to locale, job to job, plant to plant. For example, on the whole, secretaries travel less than salesmen, but in some companies the converse may be true. Thus, some facts in information systems are only relative or normative facts. Other "facts" in information systems are not facts at all, but judgments or inferences made from other facts. For example, almost no research has been done to determine personality requirements for specific occupations. With current tools such research is difficult at best. Yet occupational information systems invariably cite particular personality traits as important for certain occupations. Systems which do not provide in-service for users and staff on the weaknesses as well as merits of the information component may foster misconceptions about the world of work and thus subsequently distort the choice process.

A final consideration in examining systems involves claims made by the system about the system. If the system professes to be a career guidance system, or if claims are made that it can fulfill the organization's total career development responsibilities, potential purchasers should be immediately skeptical. Most systems provide good information and excellent access strategies for those desiring to narrow down career choices. Most systems are weak when it comes to promoting career exploration, or expanding the career awareness of users. In either case, more is needed than information itself. As stated previously, good career information is necessary but not sufficient for good career decision-making. Decision-making also requires skills in self assessment and the decision-making process. Assistance in these aspects of the choice process cannot be effectively provided by machines. The same holds true for career exploration. Staff mediation in using the system is usually necessary to assure that users employ the system to explore and not prematurely narrow their choices. This is especially critical when dealing with

youth since their experience base is small and their decision-making skills are untried. Staff involvement is essential to avert selection of over-simplified decisions vs. a more complicated decisioning process, i.e., a staff person may be able to use information to explain the more complicated concept of a career lattice vs. the student identification of a simple career ladder.

Examining various systems using the questions cited above should enable interested parties to select a system to fit their needs. However, if it is determined that purchase or adaption of an existing system does not fit the needs of the agency it may be possible to organize and implement a more appropriate system. Below is a brief presentation on some systems which meet the criteria cited above as well as some points to consider in organizing and implementing a new system.

IMPLEMENTING/ORGANIZING A SYSTEM

Since the early 1970's, the U.S. Department of Labor has funded the development of state-wide career information systems in nine states--Alabama, Colorado, Massachusetts, Michigan, Minnesota, Ohio, Oregon, Wisconsin and Washington. These systems compile, appraise, format and deliver information that is produced through the efforts of federal, state and local agencies. Thus, they deliver National and State and localized career information. In each consortium this information is updated on a regular basis.

These consortiums also are responsible for delivering the information to users through a variety of access and dissemination strategies. Access strategies include structured search processes that list occupations related to a variety of variables, interests, values, abilities and so on. Dissemination of information is provided through diverse media including at least computers and printed materials. Delivery standards include:

(a) independent user operability,

(b) accessibility--systems should be accessible throughout the agency's regular scheduled day, and

(c) varied media must be provided.

Cooperative policy-making boards govern each system. These boards include representatives from producers such as the state's employment service, the state's education system, local employer and labor groups, and users such as education, manpower training, and social service agencies.

Each consortium is required to provide services to agencies using the system. The user services staff of each system is required to provide training and trouble shooting for each user agency. They are also required to publicize the systems, negotiate contracts with user agencies and evaluate the delivery system components.

Agencies in states where consortium systems already exist should investigate the possibility of joining these systems. Agencies, especially state CETA organizations and prime sponsors, which are not located in states with a career information system, may be able to help establish a system in their state. The first step to complete in preparing to organize a system is to determine the needs of potential user agencies and organizations. Contacts should be made with the state employment service, the state department of

education, offices of higher education, the State Occupational Information Coordinating Committee, the State Educational Information Center, other Prime Sponsors, and state social service organizations such as vocational rehabilitation. In each case, the best contact person initially is usually the head of the agency. S/he can make references to others who can provide the specific data needed with respect to interest in inaugurating a statewide career information consortium. Gaining widespread cooperation is critical since the cost of a system for any single agency may be prohibitive. Multiple agency use can lead to a per user cost lower than that for much less useable information systems.

If cooperation seems possible, a second step involves inventorying existing resources. Critical resources include existing computer and other media networks as well as personnel already involved in either information development or dissemination. Inventorying resources also holds the potential for identifying additional support and user groups. For example, existing computing centers often have equipment which is under-utilized. Computer centers may see providing career information as a means of adding to services and thereby increasing cost efficiency.

If developing a system seems feasible, the next step involves acquiring financial assistance. At least a year of funding is needed at the onset to defray start-up costs as well as provide support during system establishment in user sites. Once established, user fees can be assessed to support the system. Funds for initial development of information systems are potentially available from a variety of sources. Sources include, but are not limited to:

I. Comprehensive Employment and Training Act (CETA) Funds.

   a) State and local CETA prime sponsors

   b) Special governor's set asides and discretionary funds.

II. Education Funds

   a) State and local education agencies

   b) Federal Education funds

      1) Administered through the State vocational education agency.
      2) Career Education office -- funding is available at the State or National level.
      3) Elementary, secondary, and higher education funds

III. The Employment Service

IV. The National Occupational Information Coordinating Committee (NOICC) --discretionary funds and special grant program

   NOICC - Career Information System Incentive Grants.

   The National Occupational Information Coordinating Committee (NOICC) has officially adopted the Career Information System of the Department of Labor as the standard concept for encouraging the development and use of occupational information for career choice and job search purposes (the nine previously mentioned Department of Labor funded programs). In adopting this concept it is the intention of NOICC to continue to encourage the development of career information system consortiums in all states through a series of incentive grants which will be made available in mid-1979. These

grant will focus on fostering implementation of systems in states which have not already received money from the Department of Labor for this purpose.

SOURCES OF ASSISTANCE

Those interested in either developing or adopting a computerized system would do well to contact others who have experience in computerized system organization and implementation. State directors of the existing systems can provide initial help. A list of names and addresses follows.

State-wide Information Systems' Consortium Directors for nine DOL-funded states

ALABAMA

Contact Person: Dr. Charles Graves
Executive Director
State of Alabama
Occupational Information System
First Alabama Bank Building
901 Adams Avenue
Montgomery, Alabama 36130
205/832-5737

COLORADO

Contact Person: Ms. Pauline A. Parish
Director, Colorado Career Info. System
University of Colorado
Willard Administrative Center, Rm. 7
Boulder, Colorado 80309
303/492-8932

MASSACHUSETTS

Contact Person: Dr. Thomas Welch
Director
Massachusetts Occupational Information System
60 William Street
Wellesley Hill, Massachusetts 02181
617/237-2942

MICHIGAN

Contact Person: Mr. Joseph McGarvey
Michigan Occupational Information System
State Department of Education
Box 30009
Lansing, Michigan 48909
517/373-0815

MINNESOTA

Contact Person: Mr. James R. Spensley
Executive Director, Minnesota Occupational Information System
Minnesota Higher Education Coordinating Commission
670 American Center Building
160 East Kellogg Boulevard
St. Paul, Minnesota 55101
612/292-6900

OHIO	Contact Person:	Ms. Deborah Gorman Chief, Career Information System 309 Fourth Street Columbus, Ohio 43216 614/466-8987
WASHINGTON	Contact Person:	Mr. Elton Chase c/o The Evergreen State College Science Laboratory Building 2 #1254 Olympia, Washington 98505 206/866-6740
WISCONSIN	Contact Person:	Dr. Roger Lambert Executive Director Wisconsin Career Information System Wisconsin Vocational Studies Center 964 Educational Sciences Building 1025 W. Johnson Street Madison, Wisconsin 53706 608/263-2704
OREGON	Contact Person:	Dr. Bruce McKinlay, Director Career Information System 247 Hendricks Hall University of Oregon Eugene, Oregon 97403

Two additional states developing CIS with local resources:

CALIFORNIA	NEW YORK
Mr. James Stubblefield Director Project Eureka Diablo Valley College Pleasant Hill, California 94523	Dr. Peter Mollo Office of Educational Statistics Board of Education City of New York 110 Livingston Street Brooklyn, New York 11201

More in-depth consultation can be obtained through the National Occupational Information Coordinating Committee (NOICC), the Department of Labor Employment and Training Administration, or the Association of Computer Based Systems of Career Information (ACSCI).

The contact person at NOICC is:

Mr. Russell Flanders
Acting Director
National Occupational Information Coordinating Committee
Riviere Building, Room 801
400 Maryland Avenue
Washington, D.C. 20202
202/653-7000

For further information contact:

Department of Labor
Employment & Training Administration
601 D Street N.W.
Washington, D.C. 20213

The contact person at ACSCI is:

Mr. James Spensley
President
Association for Computer Based Systems
of Career Information
670 American Center Building
150 E. Kellogg Boulevard
St. Paul, Minnesota 55701
612/296-6962

Agencies not interested in adapting or developing a computerized career information system but nevertheless interested in other types of systems or materials should consult guidance directors with state departments of education. The state department may have already developed mechanical or library materials specific to the state. If not, the guidance director should be able to assist in locating materials with probable value in the state or region. These can then be further evaluated for agency use.

One important topic not covered in any detail above deals with techniques and procedures for using information with individuals presenting particular career exploration or decision-making problems. If agency staff plan to use career information while working with individual clients they should be trained in its proper use. The state department of education's vocational guidance director can provide some assistance as to where staff in-service training can be obtained. Other sources of assistance include staff in guidance departments of colleges and universities or local high school vocational guidance counselors.

Assistance with information on entrance occupations and occupational openings in the state can be obtained from the state Job-Service. Each state Job Service has specialists in occupational research and information development.

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